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EXAMINER

BETT, JACOB F

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/813,573	<b>Applicant(s)</b> HARIK ET AL.	
	<b>Examiner</b> Jacob F. Bétit	<b>Art Unit</b> 2169	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5,7,8,10,12,14,17-20 and 22-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,8,10,12,14,17-20 and 22-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Remarks***

1. In response to communications filed on 4 May 2009, claims 1, 3, 4, 8, 10, 12, 14, 17, 18, 19, 20, and 23-28 are amended. Claims 1-5, 7, 8, 10, 12, 14, 17-20, and 22-28 are presently pending in the application.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 7, 10, 12, 14, 17-20, and 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chi et al., "Context Query in Information Retrieval" in view of Pant et al. (U.S. patent No. 6,012,053).

As to claim 1, Chi et al. teaches method, performed by a device, comprising:

identifying, using a processor associated with the device, an implicitly defined semantic structure in a document, where a plurality of rules are associated with the implicitly defined semantic structure, and where the semantic structure includes a list having a header and a plurality of items associated with the header (see section 4, first paragraph; rule 1; rule 5; and rule 6);

determining, using the processor, a location of a first term and a location of a second term within the list (see section 3, first 11 lines);

selecting, using the processor, one of the plurality of rules based on a relationship of the locations of the first and second terms within the implicitly defined semantic structure (see section 4, first paragraph),

where a second rule of the plurality of rules, different than the first rule, is selected when the first term is located in one of the plurality of items and the second term is located in the same one of the plurality of items (see section 4, rule 1), and

where a third rule of the plurality of rules, different than the first rule and the second rule, is selected when the first term is located in the header and the second term is located in one of the plurality of items (see section 4, rules 5 and 6).

Chi et al. does not distinctly disclose a) where a first rule of the plurality of rules is selected when the first term is located in one of the plurality of items and the second term is located in a different one of the plurality of items; b) determining, using the processor, a distance value between the first and second terms using the selected rule; and c) outputting, using the processor, the distance value to rank the document for relevancy to a search query that includes the first term and the second term.

Pant et al. teaches a) see column 2, lines 4-24 and see 12, lines 33-50; b) see column 2, lines 4-24, "distance between terms in an item"; and c) see column 2, lines 25-43 and column 3, lines 56-63, "outputs scores". Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Chi et al. to include the teachings of Pant et al. because these teachings would enable search results to be ordered in a manner that is preferable to the user (see Pant et al., column 1, line 65 through column 2, line 3).

As to claim 2, Chi et al. as modified, teaches the document being an HTML (Hyper-Text Markup Language) document (see section 2, third paragraph).

As to claim 3, Chi et al. as modified, teaches where the list is created with HTML tags (see section 2, third paragraph).

As to claim 4, Chi et al. as modified, teaches where the HTML tags include paragraph tags, new line tags, bold tags, or table tags (see section 4, rule 1, rule 5, and rule 6).

As to claim 5, Chi et al. as modified, teaches further comprising: locating explicitly defined semantic structures (see section 4, rule 6).

As to claim 7, Chi et al. as modified, teaches the distance value being calculated as a word count between the first and second terms in the document augmented by ones of the rules related to the implicitly defined semantic structure (see Pant et al., column 12, lines 33-50).

As to claim 10, Chi et al. teaches a system comprising:

a device comprising:

means for identifying an implicitly defined semantic structure associated with terms in a document, where a number of rules are associated with the implicitly defined semantic structure, and where the semantic structure includes a list including a header and a plurality of items associated with the header (see section 4, first paragraph; rule 1; rule 5; and rule 6);

means for determining a location relationship between a pair of the terms within the list (see section 3, first 11 lines);

means for determining which one of the number of rules corresponds to the location relationship (see section 4, first paragraph);

where a second rule of the number of rules, different than the first rule, is determined to correspond to the location relationship when the first term is located in one of the plurality of items and the second term is located in the same one of the plurality of items (see section 4, rule 1); and

where a third rule of the number of rules, different than the first rule and the second rule, is determined to correspond to the location relationship when the first term is located in the header and the second term is located in one of the plurality of items (see section 4, rules 5 and 6).

Chi et al. does not distinctly disclose a) where a first rule of the number of rules is determined to correspond to the location relationship when the first term is located in one of the plurality of items and the second term is located in a different one of the plurality of items; b) means for determining a distance value between the pair of terms based on the one rule; and c) means for generating a ranking score for the document based on the distance value; and means for outputting the ranking score.

Pant et al. teaches a) see column 2, lines 4-24 and see 12, lines 33-50; b) see column 2, lines 4-24, "distance between terms in an item"; and c) see column 2, lines 25-43 and column 3, lines 56-63, "outputs scores". Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Chi et al. to include the teachings of Pant

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et al. because these teachings would enable search results to be ordered in a manner that is preferable to the user (see Pant et al., column 1, line 65 through column 2, line 3).

As to claim 12, Chi et al. teaches a method performed by a device, comprising:

identifying, using a processor associated with the device, a semantic structure associated with terms in a plurality of documents, where a number of rules are associated with the semantic structure, and where the semantic structure includes a list including a header and a plurality of items associated with the header (see section 4, first paragraph; rule 1; rule 5; and rule 6);

locating, using the processor, a first term and a second term occurring within the list (see section 3, first 11 lines);

selecting, based on a relationship of the locations of the first and second terms, at least one of the number of rules to be used in determining a distance value between the first and second terms (see section 4, first paragraph);

where a second rule of the number of rules, different than the first rule, is selected when the first term is located in one of the plurality of items and the second term is located in the same one of the plurality of items (see section 4, rule 1), and

where a third rule of the number of rules, different than the first rule and the second rule, is selected when the first term is located in the header and the second term is located in one of the plurality of items (see section 4, rules 5 and 6).

Chi et al. does not distinctly disclose a) where a first rule of the number of rules is selected when the first term is located in one of the plurality of items and the second term is located in a different one of the plurality of items; b) determining, using the processor and using

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the at least one rule, the distance value between the first and second terms within the semantic structure when the first and second terms occur in a search query; and c) ranking, using the processor, the documents for relevancy to the search query based on the determined distance value; and outputting, using the processor, the rankings of the documents in response to the search query.

Pant et al. teaches a) see column 2, lines 4-24 and see 12, lines 33-50; b) see column 2, lines 4-24, "distance between terms in an item"; and c) see column 2, lines 25-43 and column 3, lines 56-63, "outputs scores". Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Chi et al. to include the teachings of Pant et al. because these teachings would enable search results to be ordered in a manner that is preferable to the user (see Pant et al., column 1, line 65 through column 2, line 3).

As to claim 14, Chi et al. as modified, teaches where the semantic structure is implicitly defined (see section 4, rule 1 and rule 5).

As to claim 17, Chi et al. as modified, teaches where the semantic structure is identified prior to the ranking (see section 2, third paragraph).

As to claim 18, the applicant is directed to claim 2 above.

As to claim 19, the applicant is directed to claim 3 above.

As to claim 20, the applicant is directed to claim 4 above.



As to claim 22, Chi et al. teaches device comprising:

a memory; and a processor coupled to the memory (see Abstract, “search engine” is run on a computer) to:

identify a semantic structure associated with a first term and a second term occurring in a document, where a plurality of rules are associated with the semantic structure, and where the semantic structure includes a list having a header and a plurality of items associated with the header(see section 4, first paragraph; rule 1; rule 5; and rule 6);

determine a semantically based distance relationship that exist between the first term and the second term in the identified semantic structure (see section 3, first 11 lines);

select one of the plurality of rules that corresponds to each of the distance relationships (see section 4, first paragraph);

where the processor is configured to select a second rule of the plurality of rules, different than the first rule, when the first term is located in one of the plurality of items and the second term is located in the same one of the plurality of items (see section 4, rule 1), and

where the processor is configured to select a third rule of the plurality of rules, different than the first rule and the second rule, when the first term is located in the header and the second term is located in one of the plurality of items (see section 4, rules 5 and 6).

Chi et al. does not distinctly disclose a) where the processor is configured to select a first rule of the plurality of rules when the first term is located in one of the plurality of items and the second term is located in a different one of the plurality of items; b) determine, using the selected rule, the semantically based distance value between the first term and the second term, where the first term and the second term occur in a search query; and c) rank the document for relevancy to

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the search query based on the semantically based distance value; and provide at least some of the ranks in response to the search query.

Pant et al. teaches a) see column 2, lines 4-24 and see 12, lines 33-50; b) see column 2, lines 4-24, "distance between terms in an item"; and c) see column 2, lines 25-43 and column 3, lines 56-63, "outputs scores". Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Chi et al. to include the teachings of Pant et al. because these teachings would enable search results to be ordered in a manner that is preferable to the user (see Pant et al., column 1, line 65 through column 2, line 3).

As to claim 23, Chi et al. as modified, teaches where the processor is further to: locate implicitly defined semantic structures in the document; and use the implicitly defined semantic structures in determining the semantically based distance value (see section 4, rules 1 and 5).

As to claim 24, Chi et al. as modified, teaches where the processor is further to: receive the search query (see section 3, first 11 lines).

As to claim 25, Chi et al. teaches a memory device containing computer-executable instructions, the memory device comprising:

one or more instructions to receive a search query; one or more instructions to identify an implicitly defined semantic structure associated with terms in documents, where a plurality of rules are associated with the implicitly defined semantic structure, and where the semantic

structure includes a list having a header and a plurality of items associated with the header (see section 4, first paragraph; rule 1; rule 5; and rule 6);

one or more instructions to determine a semantic-based distance between a first term and a second term within the list (see section 3, first 11 lines);

one or more instructions to select one of the plurality of rules based on the semantic based distance between the first and second terms within the implicitly defined semantic structure (see section 4, first paragraph);

where a second rule of the plurality of rules, different than the first rule, is selected when the first term is located in one of the plurality of items and the second term is located in the same one of the plurality of items (see section 4, rule 1), and

where a third rule of the plurality of rules, different than the first rule and the second rule, is selected when the first term is located in the header and the second term is located in one of the plurality of items (see section 4, rules 5 and 6);

Chi et al. does not distinctly disclose a) where a first rule of the plurality of rules is selected when the first term is located in one of the plurality of items and the second term is located in a different one of the plurality of items; b) one or more instructions to determine, using the selected rule, a distance value for the first and second terms; and c) one or more instructions to rank the documents for relevancy to the search query based on the distance value; and one or more instructions to present the documents in an order influenced by the ranking.

Pant et al. teaches a) see column 2, lines 4-24 and see 12, lines 33-50; b) see column 2, lines 4-24, "distance between terms in an item"; and c) see column 2, lines 25-43 and column 3, lines 56-63, "outputs scores". Therefore, it would have been obvious to one having ordinary skill

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in the art at the time of the invention to have modified Chi et al. to include the teachings of Pant et al. because these teachings would enable search results to be ordered in a manner that is preferable to the user (see Pant et al., column 1, line 65 through column 2, line 3).

As to claim 26, the applicant is directed to claim 2 above.

As to claim 27, the applicant is directed to claim 3 above.

As to claim 28, the applicant is directed to claim 5 above.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chi et al., “Context Query in Information Retrieval” in view of Pant et al. (U.S. patent No. 6,012,053) and in further view of Mukherjee, “Automatic Discovery of Semantic Structures in HTML Documents”.

As to claim 8, Chi et al. as modified, does not expressly disclose wherein identifying the implicitly defined semantic structure includes: identifying repeating occurrences of a set of two or more text formatting commands. However this feature is taught by Makherjee in the section labeled our approach. Thus, it would have been obvious to one of ordinary skill in the art to use the teachings of Makherjee in the invention as it would locate contexts that would not have been found in the system of Chi and thus make the results more accurate.

### ***Response to Arguments***

5. Applicant's arguments filed 4 May 2009 have been fully considered but they are not persuasive.

The previous rejection given under 35 USC §101 was withdrawn do to the fact that it is believed that the applicant means for a "device" to be a piece of hardware as indicated in paragraph 0025 of the specification. If the applicant disagrees, the applicant is invited to comment.

In response to the applicant's arguments that Pant "does not disclose or suggest determining a distance value between terms, which are both located within a list, using a rule that is selected from a plurality of rules based on where the terms occur within the list", the arguments have been fully considered, but are not deemed persuasive. Pant teaches adding different scores together based on set user preferences for ranking of key terms. This score is a distance value from what the user wants from a search phrase, and what the user actually gets within the search results. The distance is calculated using different rules to which the user sets the importance. Some of these rules can be found in column 2, lines 4-24. The score indicates the "relevance for each of the items in the set of search results" (See column 2, lines 25-43). For instance figure 7 displays the search results with there relevancy score. Results 1 and 2 are a 100% match. Results 3-7 are an 82% match which means they have an 18% distance from the perfect 100% match. If a user has a preference set to desire one of the three rules, the user would only get that bonus to their search score if the terms matched that rule. See column 12, lines 33-50. Therefore, the combination of references does teach this limitation.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob F. Bétit whose telephone number is (571)272-4075. The examiner can normally be reached on Monday through Friday 9:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tony Mahmoudi can be reached on (571) 272-4078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Tony Mahmoudi/  
Supervisory Patent Examiner, Art Unit  
2169

jfb  
21 Jul 2009